



RP- 3200B

User's Manual

FEB-9450A Main Board, 12.1 & 15 inch LCD's

Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and the receiver.

Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and shielded AC power cables must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation.

DHHS- the CD-ROM Drive

FDA Regulations require the following statement for all laser-based devices:

“Caution, Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.”

Caution: This appliance contains a laser system and is classified as a “CLASS 1 LASER PRODUCT”. To use this model properly, read the instruction manual carefully and keep this manual for future reference. In case of any trouble with this model, please contact your nearest “Authorized Service Station”. To prevent direct exposure to the laser beam, do not try to open this enclosure.

Important Safety Information

SAFETY INSTRUCTIONS

1. Please read these safety instructions carefully.
2. Keep this User's Manual for later reference.
3. Disconnect this equipment from the AC outlet before cleaning. Don't use liquid or spray detergent for cleaning. Use only a moistened sheet or cloth.
4. For pluggable equipment, the socket-outlet should be installed near the equipment and should be easily accessible.
5. Keep this equipment from humidity.
6. Lay this equipment on a stable surface when installing.
7. Do not leave this equipment in a non-air-conditioned environment, or in a storage temperature above 60° C. Such conditions may damage the equipment.
8. The openings on the enclosure are for air convection and protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
9. Check the voltage of the power source when connecting the equipment to the power outlet.
10. Place the power cord so that it will not be stepped on. Do not place anything over the power cord. The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.
11. All cautions and warnings on the equipment should be noted.
12. If the equipment is not used for a long time, disconnect the equipment from the mains to avoid damage.
13. Never allow liquid into ventilation openings. This could cause fire or electrical shock.
14. Never open the equipment. For safety reasons, qualified service personnel should only open the equipment.
15. If one of the following situations arises, get the equipment checked by service personnel:
 - a. The Power cord or plug is damaged.
 - b. Liquid has penetrated the equipment.
 - c. The equipment has been exposed to moisture.
 - d. The equipment does not work well or you cannot get it work according to the user's manual.
 - e. The Equipment has been dropped and damaged.
 - f. The equipment has obvious signs of damage.

Caution: Danger of explosion if battery is incorrectly replaced. Replace only with same type, and discard used batteries according to manufacturers instructions.

Warnings: Not intended for Outdoor Use.

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Chapter 1

Introduction

Model RP-3200B Characteristics

- Ø Model RP-3200B uses a high speed processor capable of handling a high capacity of data efficiently.
- Ø The Model solid quality Aluminum housing distinguishes it from ordinary plastic housings.
- Ø The Model touch terminal all-in-one design combines a powerful PC, multiple LCD and touch screens, which are suitable for any market. The primary LCD panel can be tilted at multiple angles.
- Ø The Model functionality extends far beyond the standard setup. The Model can be adapted for a variety of uses with the addition of any of the following options: Magnetic Card Reader, VFD/LCD customer display and cashdrawer, Modem, LAN, Audio devices, Compact Flash or USB devices (all available upon request).
- Ø The Model security is designed to prevent data theft. The Model system is comprised of two internal 2.5" HDDs .
- Ø The solid aluminum design enhances heat dissipation and passes EMI testing.

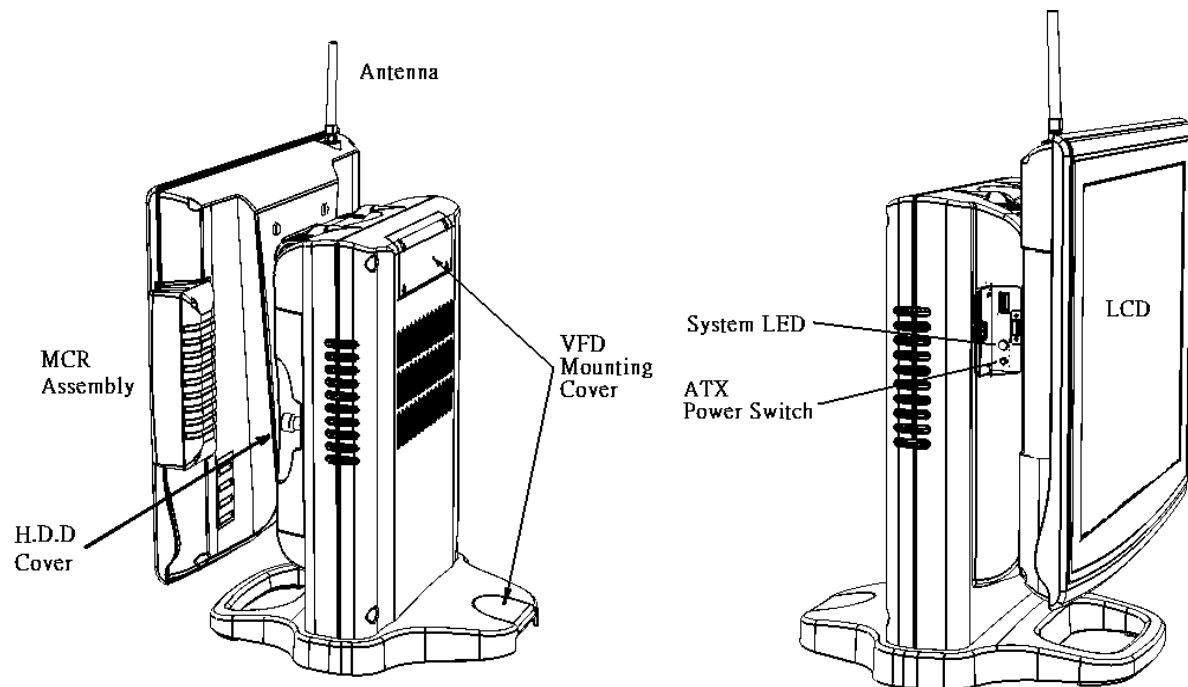
How to Use This Manual

This manual contains all the information you need to set up and use Model RP-3200B. In addition, you can also consult the manuals for the operating system and added hardware.

- Chapter 1** Provides an introduction to Model RP-3200B and this manual.
- Chapter 2** Provides all necessary information for all hardware setup.
- Chapter 3** Provides the necessary information for installing the Intel Chip set driver, Video drivers and the touch screen tools, Audio, USB and LAN drivers.
- Chapter 4** Lists all Model RP-3200B specifications and Information for the I/O .
- Chapter 5** Provides information for troubleshooting Model RP-3200B.

A Visual Tour of Model RP-3200B

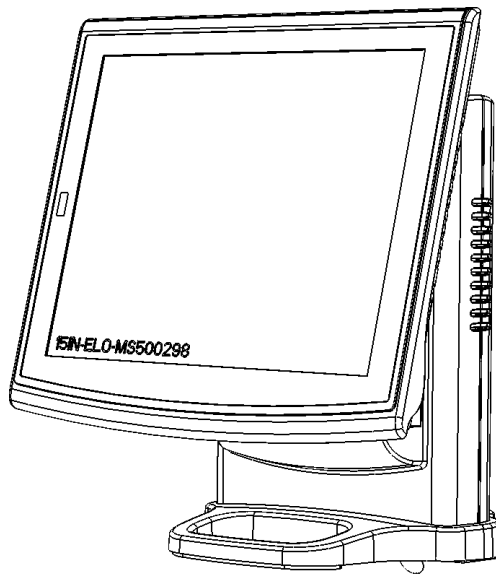
Before you start, take a few moments to become familiar with Model RP-3200B.



What comes with Model RP-3200B

The following items are standard with Model RP-3200B:

- Ø Main system with LCD panel
- Ø System Base
- Ø ATX power supply
- Ø Utility and Motherboard chipset driver CD
- Ø AC power cord



The following items are optional:

- Ø T1/2/3 Magnetic card reader (MCR) and bracket
- Ø VFD customer display
- Ø 12" /15" 2nd LCD Display



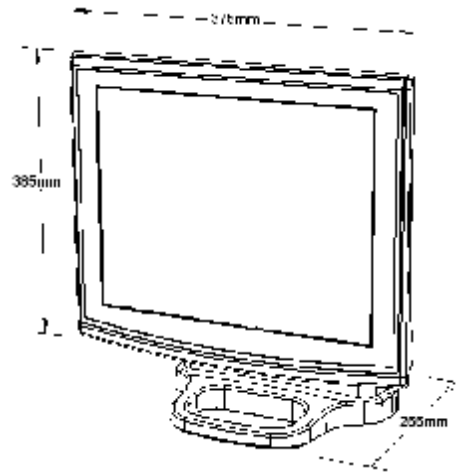
RP-3200B with MCR



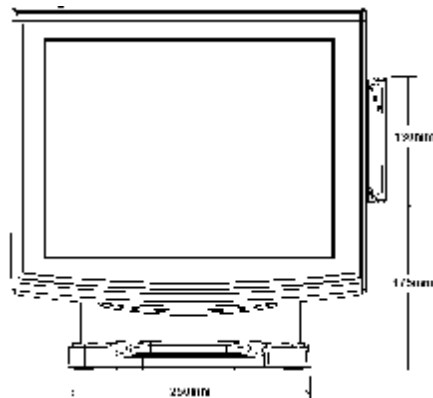
RP-3200B with VFD

**Dimensions
15"**

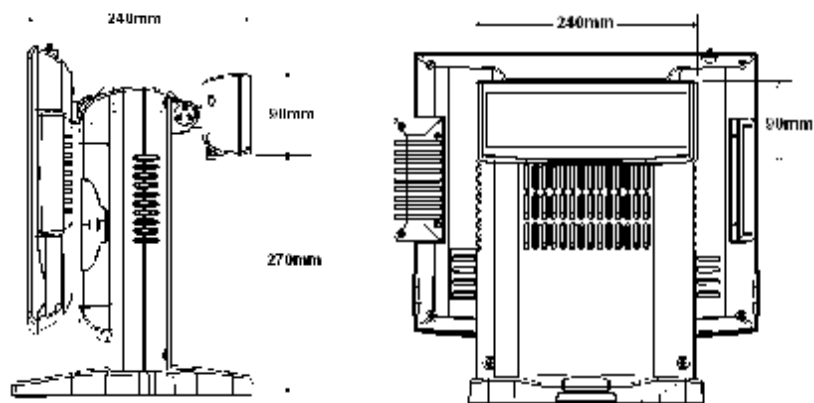
***RP-3215B
Dimensions***



***RP-3215B and
MCR Dimensions***



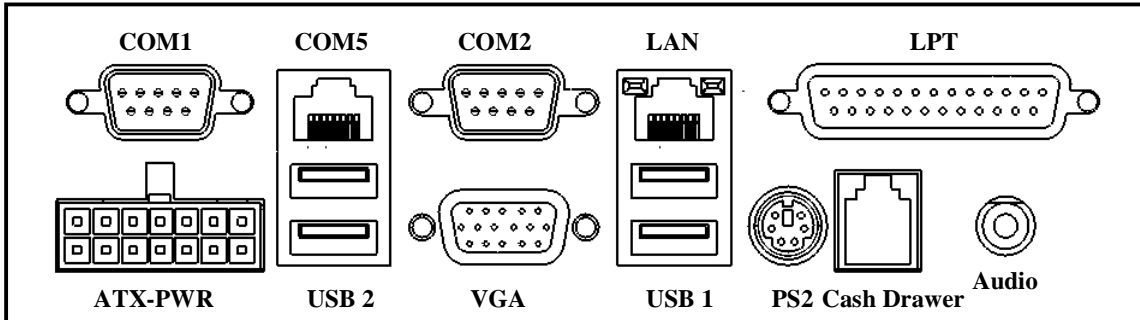
***RP-3215B and
VFD customer
display***



Connector Panels

Primary Connector Panel

The primary connector panel is located at the bottom of the main unit base. To clearly see the panel you must turn Model RP3200B upside down.



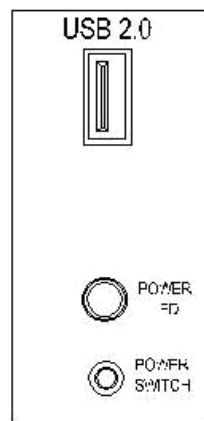
Note: This configuration is for Model DB-6000 units that have been supplied with an integral second LCD panel.

| I/O Port | Connector Type | Description |
|------------------------------|-------------------------------|---|
| ATX Power | ATX Power Connector | Connects Model RP3200B to the power supply. |
| USB 1 USB 2 | USB Type A | The USB (Universal Serial Bus) port can be used to connect USB devices. |
| COM1 COM2 | DSUB Connector | The serial ports COM1/COM2 can be used to connect serial devices such as a mouse or a fax/modem. |
| LAN | LAN RJ45 Connector | The LAN port is used to hook Model a local area network. |
| EXT VGA | D-sub15 PIN VGA Connector | The Ext VGA port is used to attach an external 2 nd Panel display or CRT monitor. |
| COM5 | RJ45 Connector | The serial port COM5 can be used to connect serial devices such as a mouse or a VFD customer display. |
| PS2 | PS2 connector | Connect the keyboard or mouse to this port |
| LPT | Parallel 25-pin LPT Connector | The standard LPT (D-SUB 25 pin) connector for connecting POS printers or KeyPro solution |
| Cash Drawer | RJ11 Connector | Cash Drawer Connector, 12 V Actuation support for solenoid. |
| Audio | Phone Jack | Connect the audio device to this port |

Second Connector Panel

The second connector panel is located on the left side of the main unit. It comes with a cover that needs to be removed a power switch & USB connector.

| I/O Port | Connector Type | Description |
|---------------------|----------------|---|
| USB | USB TYPE A | The USB (Universal Serial Bus) port can be used to connect USB devices. |
| Power LED | DUAL CHIP LED | The LED stands power on or power off.(Green : ON / Red : OFF). |
| Power Button | POWER SWITCH | ATX Power Switch function. |



Chapter 2

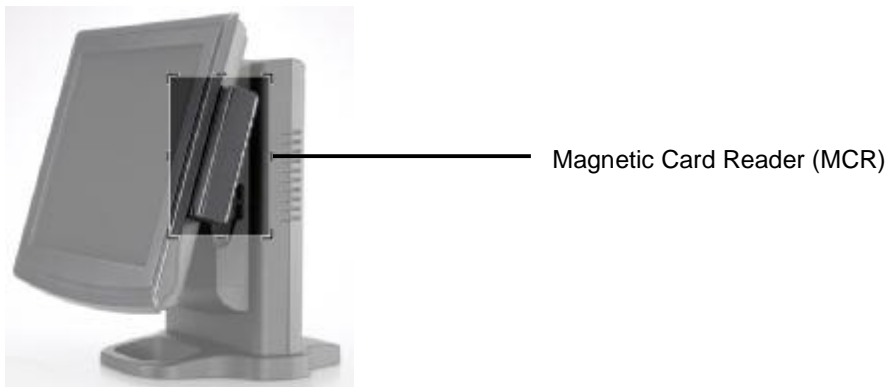
Hardware Setup

Model RP-3200B Assembly

Please make sure that the system power is turned off and the power supply is disconnected when making any hardware changes to Model RP-3200B.

Magnetic Card Reader Installation

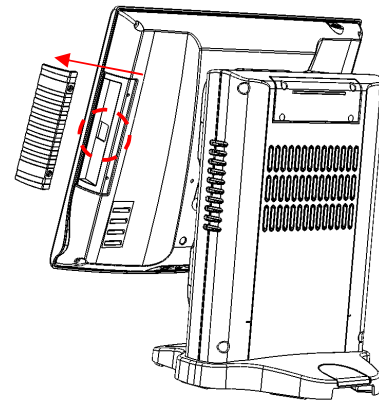
An optional Magnetic Card Reader (MCR) can be installed on the right side of Model RP-3200B.



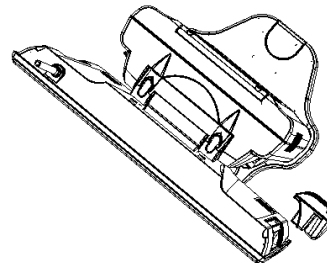
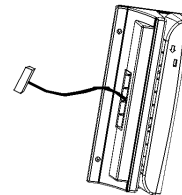
Installing an MCR

1. Turn off system power.

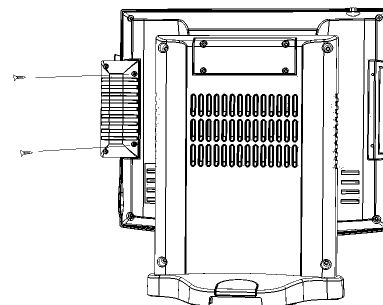
2. Remove the right side plastic cover and unplug the loopback connector from the MCR socket (circled in red). The MCR socket is found on the right side on the back of the main Unit.



3. Attach the MCR Assembly to the main unit and connect the MCR cable to the MCR socket.



4. Secure the MCR to the main unit with 2 screws.



5. Turn on system power.

Note: If the MCR does not work normally, please refer to **troubleshooting**.

Attention: The loopback or the MCR cable must be inserted in the socket for an external keyboard to function with Model RP-3200B.

MCR Parameter Modification

This option is for users who need to customize the MCR parameters for a particular task. Some of the useful parameters include:

The selection of country code, other than the default English.

The choice of track combinations.

The preamble/postamble codes.

The MCR parameters can be modified by using the supplied utility program.

The utility can be found on the CD that came with your system in the \UTILITY\Pos Utility\MCR util.

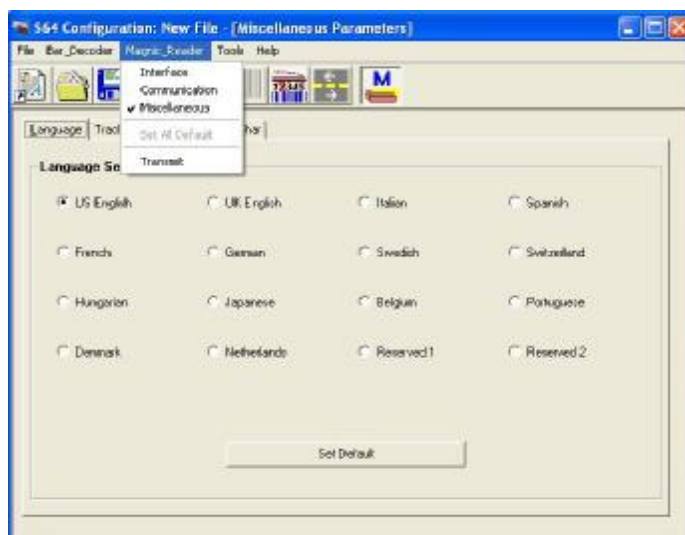
If you are upgrading and earlier system to include our MCR reader, then this utility can located on our website at http://www.firich.com.tw/tech_drivers.htm in the section labeled as “MSR Utility”.

Unzip this file onto your system hard disk then run the “**Setup.exe**” in the MSR_Util folder and follow the simple onscreen instructions.

When the installation finishes, you will find that a new folder has been created in your “Program files” folder, labeled as “Decoder” with a subfolder named “**XXX Decoder**”.

When the program has loaded please select the **Magnic Reader** menu item as in the following picture. By using the 3 top items listed; **Interface**, **Communication** and **Miscellaneous**, you will be able to alter many of the parameters associated with the MCR unit.

When you have finished your modifications and are sure that they are set exactly how you want them to be, just click on the menu item **Transmit** to download the new parameter to the MCR unit. Please refer to the Help menu for any further assistance.



VFD Customer Display Installation

An optional VFD customer display can be installed on the back of Model RP-3200B.

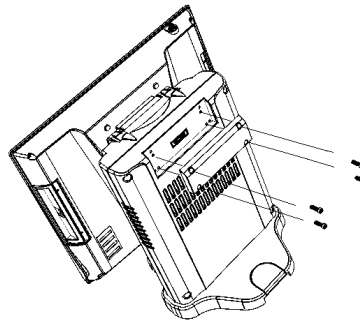


Rear view with VFD attached.

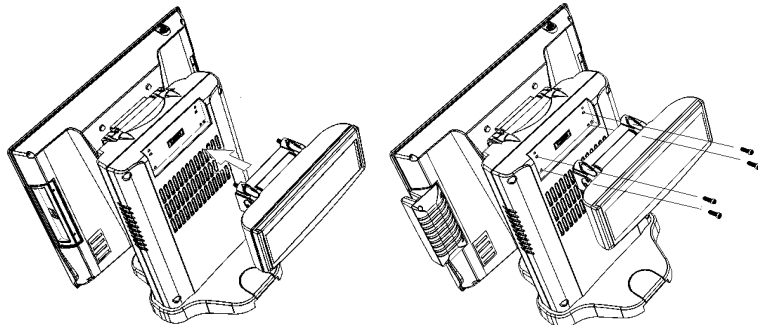
Installing a VFD

1. Turn off system power.
2. **Important**, make sure the docking board RG9000CB0930 are well connected.

3. Remove the VFD Mounting Cover from the base.



4. Secure the VFD Holder to the base with 4 screws and place VFD display into the holder.

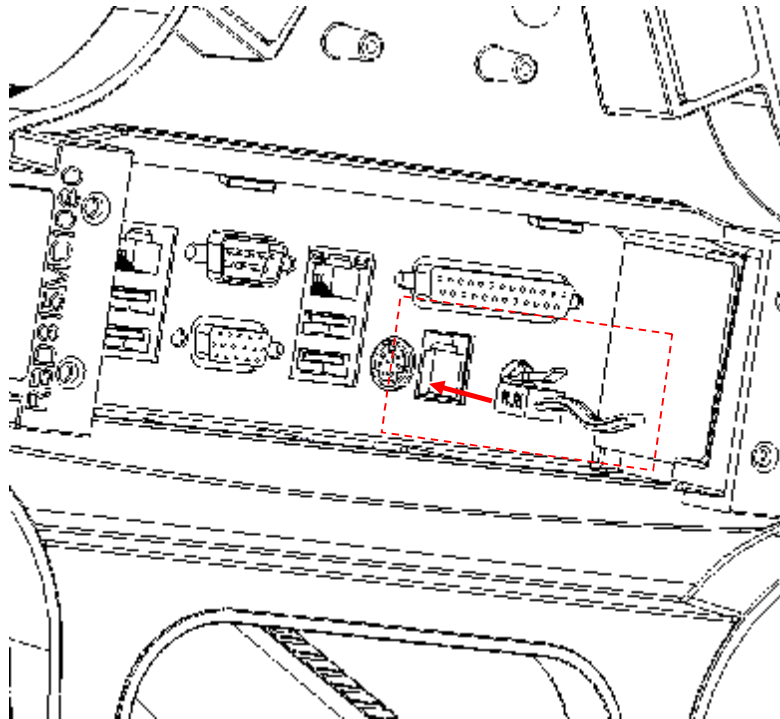


5. Turn on VFD power switch, then turn on system power.

Note: If the VFD does not display correctly after an application is loaded, please refer to **troubleshooting**.

Cash Drawer Installation

- A) Before connecting the cash drawer to Model RP-3200B, please make sure the driver, voltage and cable pin assignment of the cash drawer have to match the definition of the cash drawer port of Model RP-3200B. Relating to the Cash Drawer activation process, please refer to Page 14 Check if the I/O ports are enabled in the CMOS setup.
 - B) Check if there are any IRQ conflicts.
 - C) The motherboard could be defective.
1. Cash Drawer
 2. Plug cash drawer cable into cash drawer port.



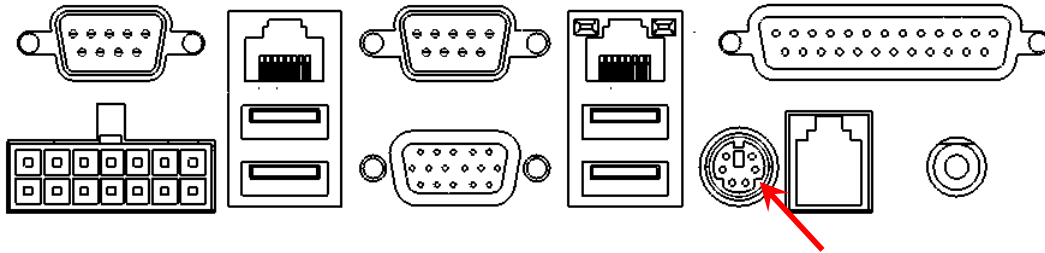
Note: If the cash drawer cannot be detected by the system, please refer to [troubleshooting](#).

Cash Drawer Activation

Cash Drawer Installation

Before connecting the cash drawer to the **RP-3200B**, please make sure the drive voltage and cable pin assignment of the cash drawer matches the definition of the cash drawer port of **RP-3200B**. Please refer to the mother board manual GPIO part for more information.

Plug cash drawer cable into the cash drawer port.



Note: If the cash drawer cannot be detected by the system, please refer to **troubleshooting**.

Up to two cash drawers may be driven from this port. Driving voltage of the solenoid is DC+12V. I/O port 2F is used for drawer operation. A test program is supplied, for Linux and Windows, source code of which is available on request by software developers.

To test for drawer open, read port **2F**, if bit 0=1 then drawer is open, if bit 0=0 drawer is closed. Before testing the cash drawer function, ensure to initiate the GPIO port first referring to the command sets below:

```
initGPIO=2e,87,2e,87,2e,07,2f,07,2e,f1
```

(2e stands for the address while '87', '07', 'f1' stands for the value to the address. All the values here are hexadecimal.)

CMOS Setup

Model RP-3200B systems have adopted the motherboard FEB-9450, using AWARD BIOS.

Please refer to the FEB-9450 M/B User's Manual for a detailed description of the BIOS CMOS setup.

Chapter 3

Software Setup

Model RP-3200B comes with a variety of drivers for different operating systems.

You will find 1 CD with Model RP-3200B. The CD has all necessary drivers to setup Model RP-3200B.

Please follow this installation sequence exactly.

Driver installation sequence:

Chipset Driver -> VGA Driver -> LAN Driver -> Audio Driver -> USB Driver -> Touch Tools -> FIX COM PORT Tools

The reason to follow our sequence is that IRQ settings will be changed by Windows 2000 and XP to non supported values, and you may encounter unnecessary problems later.

Intel Chipset Driver Installation for Windows XP & Vista

1. Insert the CD into your CD ROM Drive.
2. Locate the folder of **D:\DRIVER\CHIPSET**
3. Open **Setup.exe**



4. Click **Next**.5. Read the License Agreement and click **Yes**.

6. Click **Next** and the drivers for the Intel Chip set will install.



7. Please wait while the setup program processing.



(for Windows XP)



(for Windows Vista)

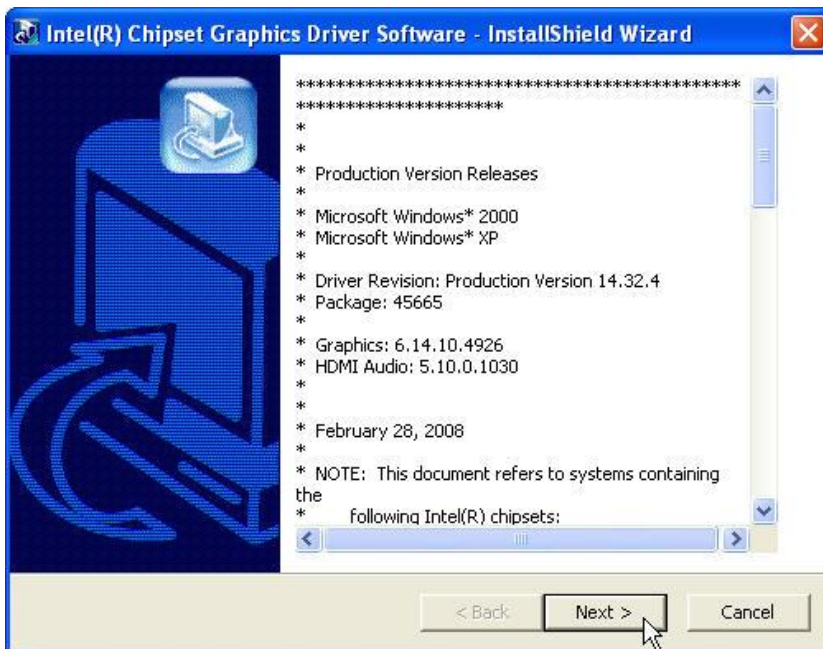
8. When the 'Setup COMPLETE' message appears click **Finish** to restart your computer.

VGA Driver Installation

9450 uses only one chipset “82945G” that is capable of driving a single or dual panel display. Only one driver needs to be installed.

945G Driver Installation for Windows XP & Vista

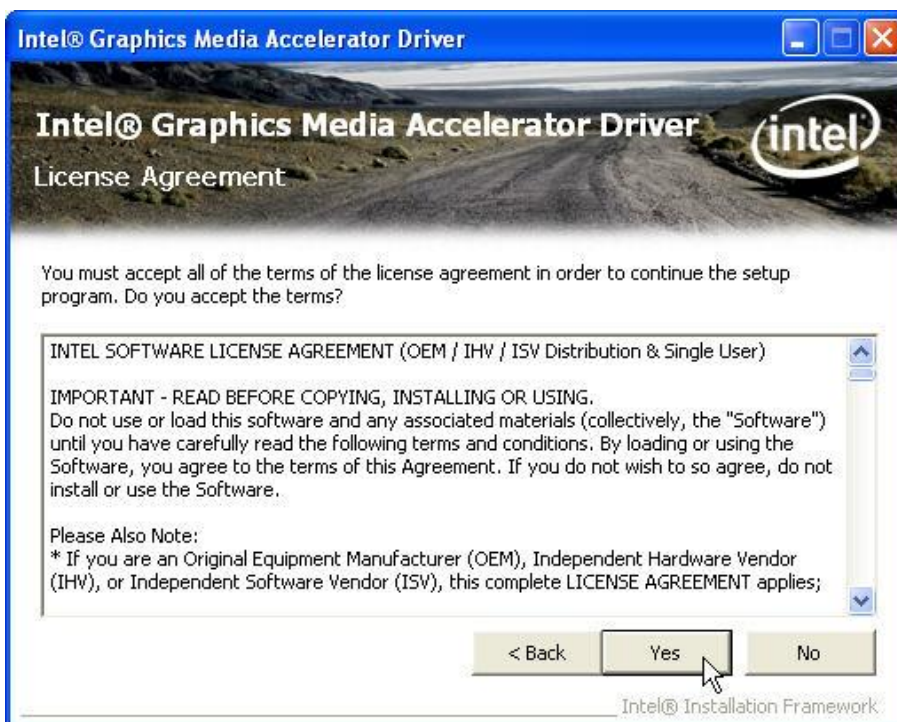
1. Locate the folder of **D:\Driver\Graphics\WinXP_2K**
2. Open **win2k_xp14324.exe**



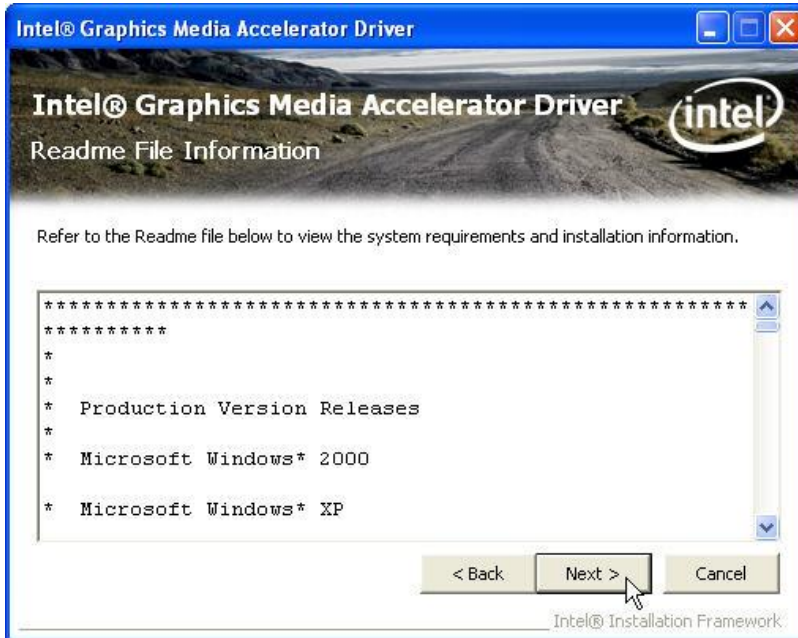
3. Select **Next** to continue.



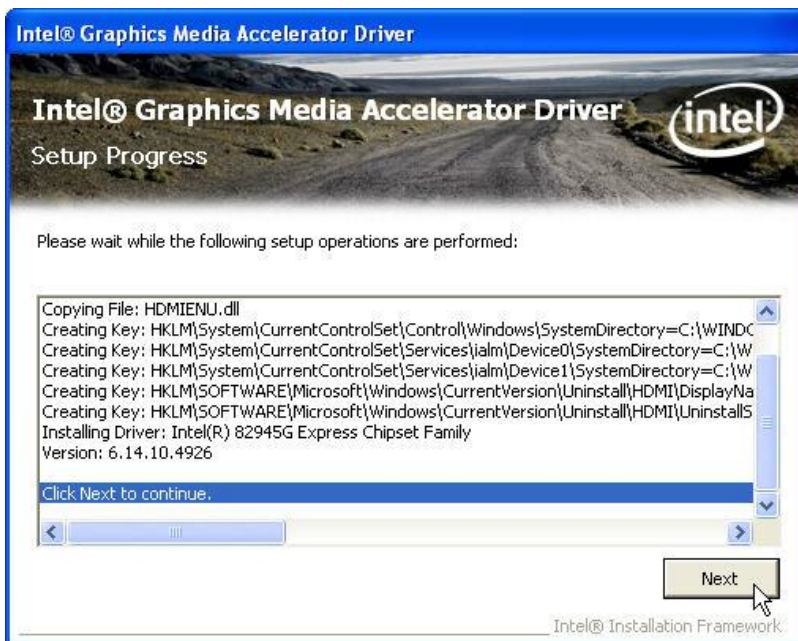
4. Select **Next** to continue.



5. Read the License Agreement and click **Yes**.



6. Click **Next** to see the setup progress.



7. Select **Next** to continue.



Click Finish to complete the installation procedure and restart the system.

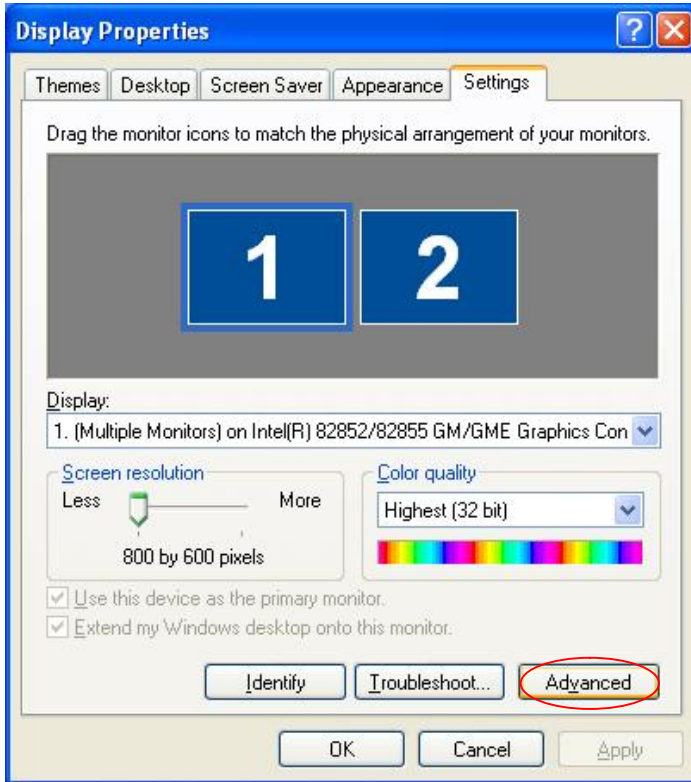
Enable second LCD panel setting Windows 2000/Windows XP.

After you have installed the VGA driver you must adjust the settings.

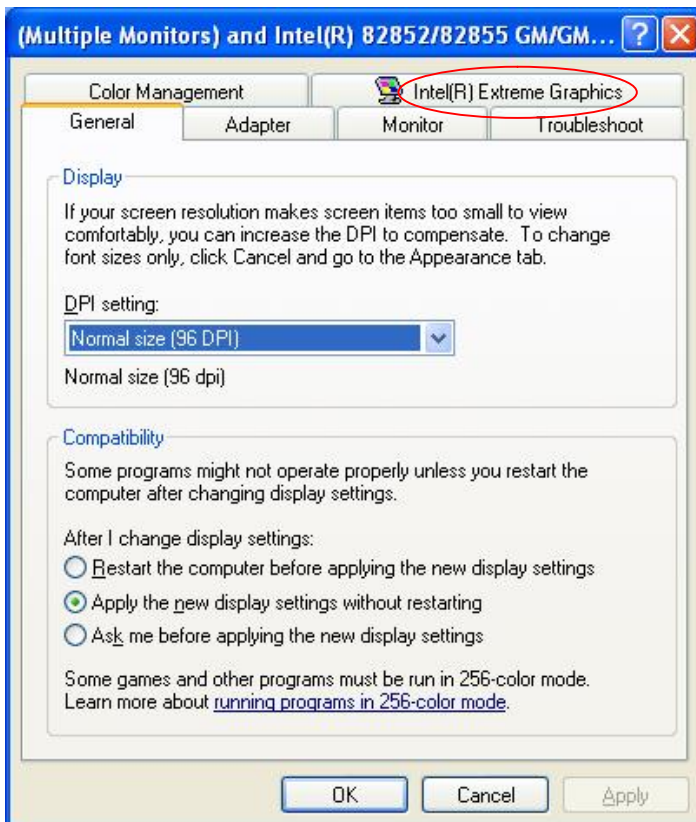
1. Right click your mouse anywhere on the desktop then click **properties**.



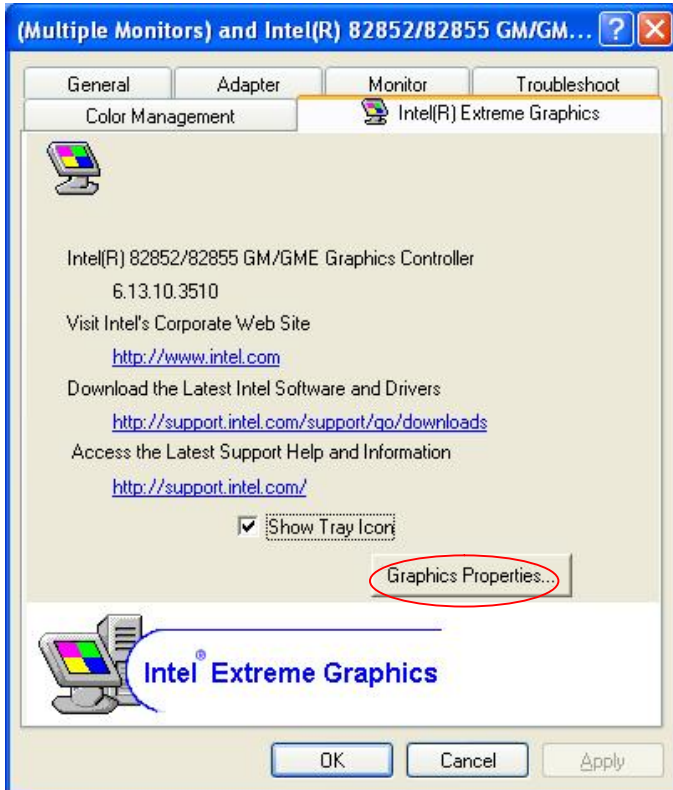
2. Click the **settings** tab.



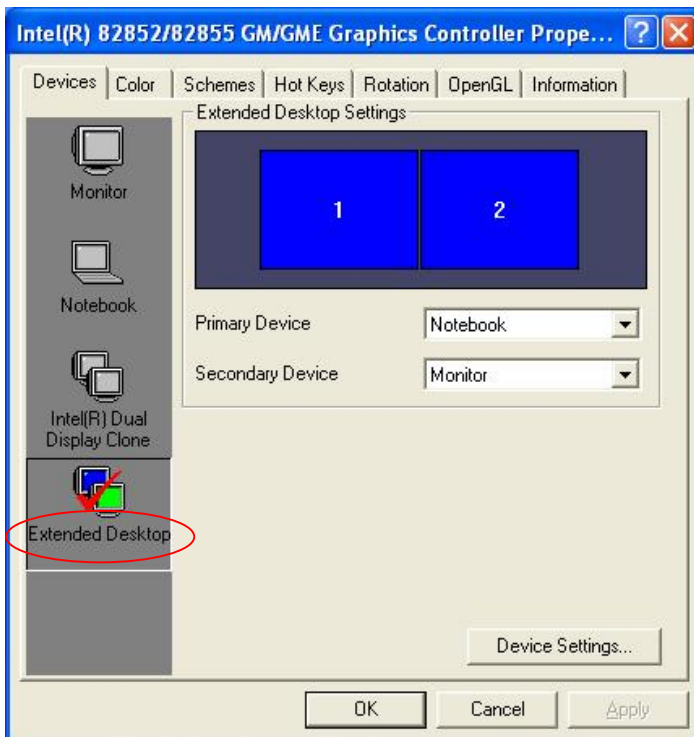
3. Click **Advanced**.



4. Click **Intel(R) Extreme Graphics**.



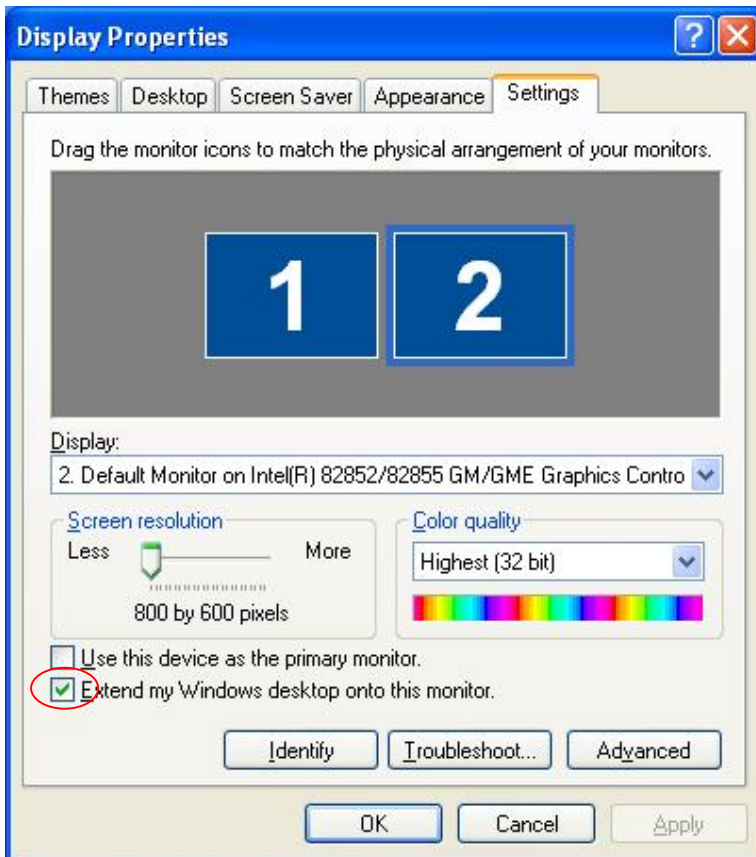
5. Click **Graphics Properties**.



6. Click **Extended Desktop** and select **Notebook** for primary device, **monitor** for secondary device.



7. Click **OK**.



8. Select the second LCD panel. This is done either by clicking on the number 2 or selecting from the dropdown menu.

For the second LCD panel make sure that **Extend my Windows desktop onto this monitor** is selected.

9. Click **Apply** then click **OK** to finish the settings.

Note. During boot sequence "**No Sync**" will appear on the second LCD panel.

The boot sequence can take a minute or so when a second LCD panel is installed.

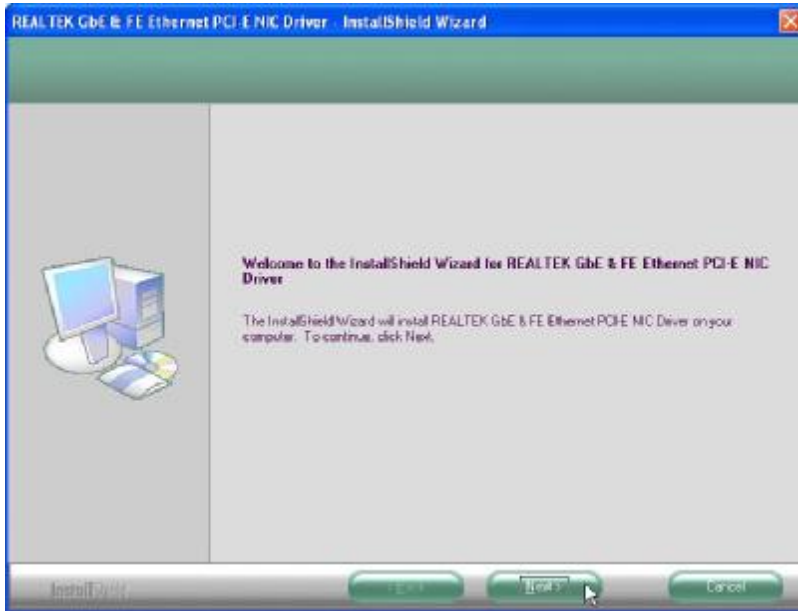
LAN Driver Installation

Realtek LAN Driver Installation Windows XP and Windows Vista

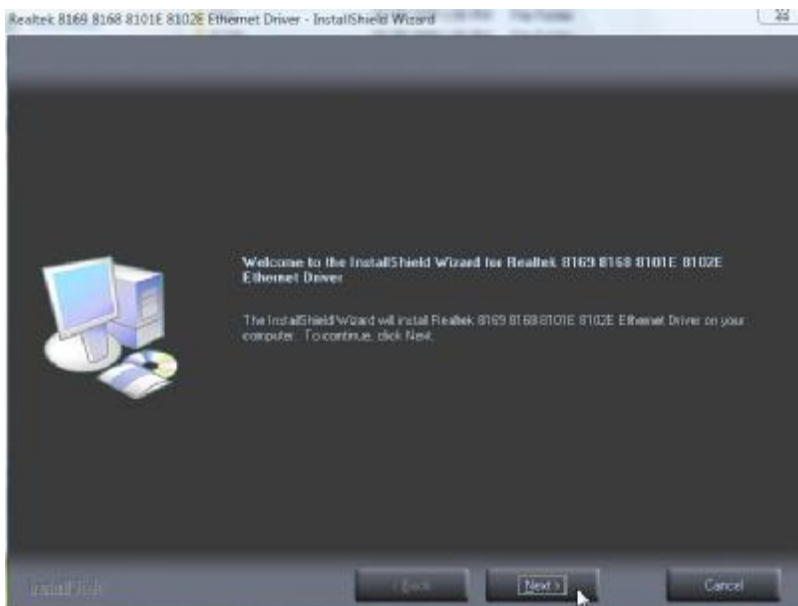
After Windows 2000 is installed the Realtek LAN driver will be automatically installed.

LAN Driver Installation for Windows XP & Vista.

1. Locate **D:\Driver\Ethernet\WinXP_2k**
2. Double click **Setup.exe**.

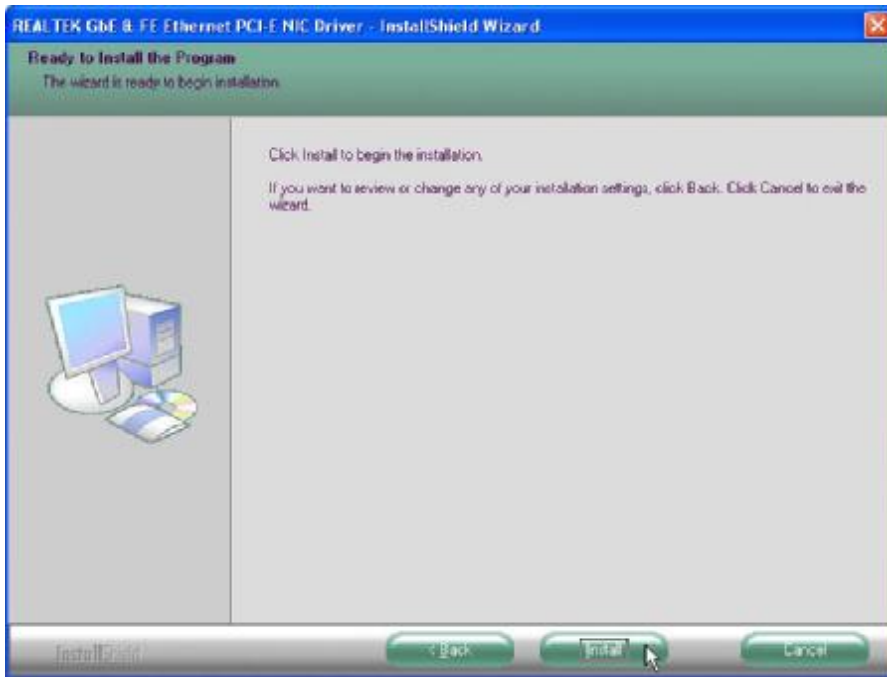


(for Windows XP)

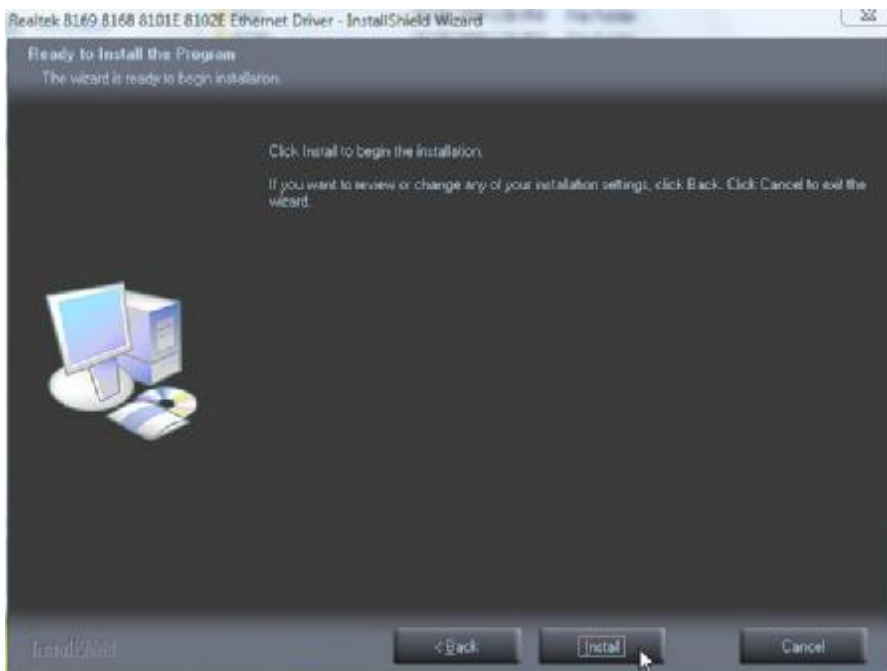


(for Windows Vista)

3. Click **Next** to continue

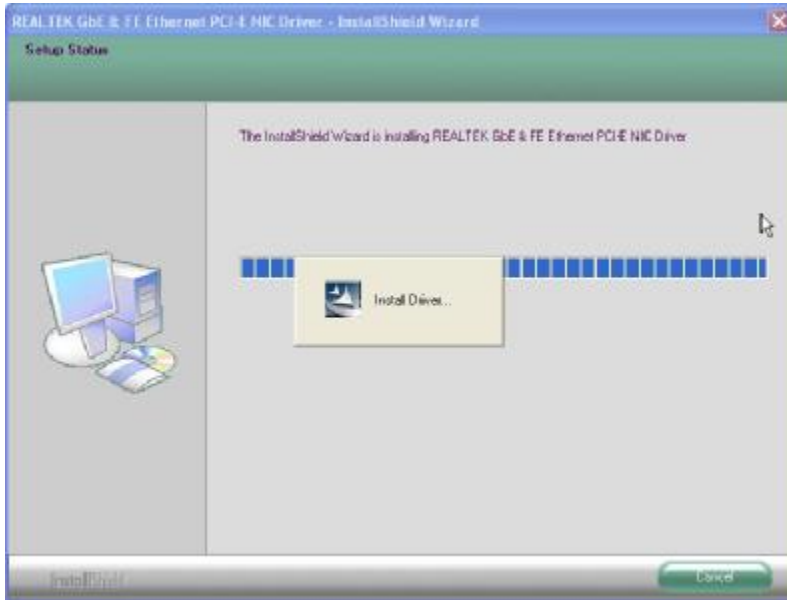


(for Windows XP)

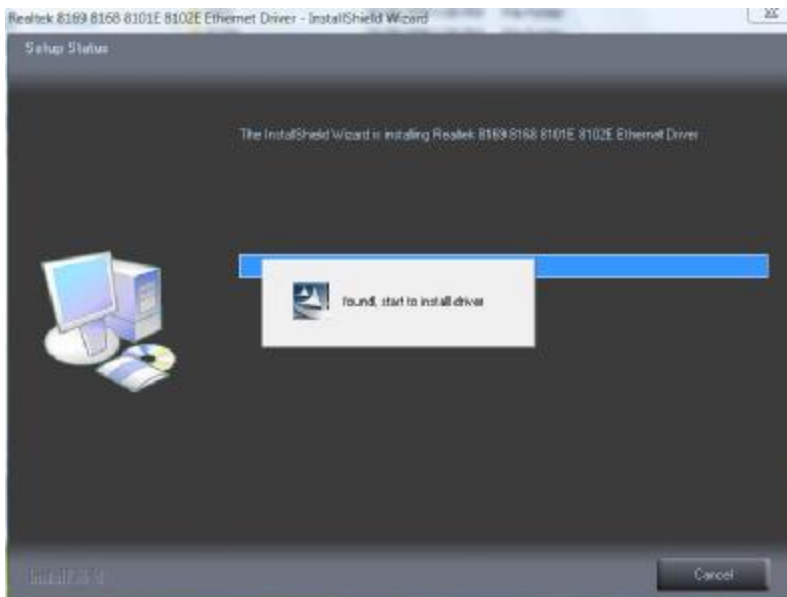


(for Windows Vista)

4. Click **Next** to continue

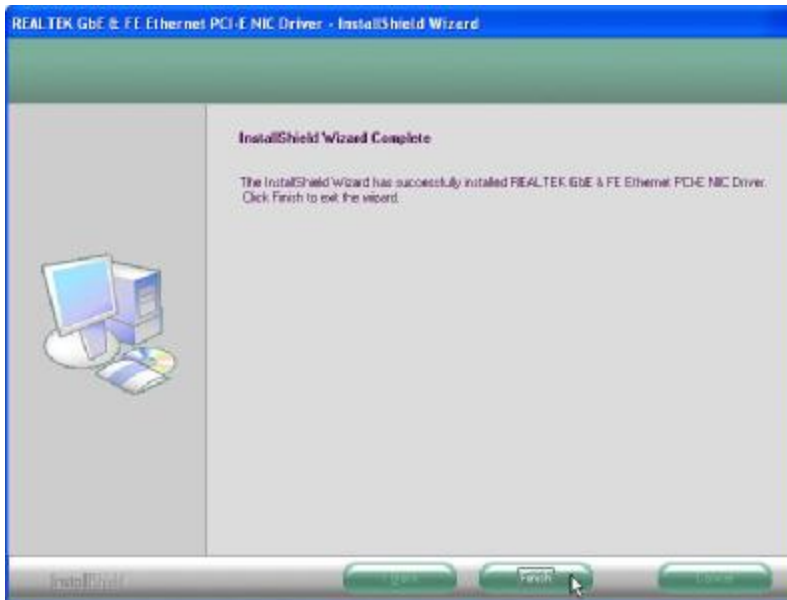


(for Windows XP)

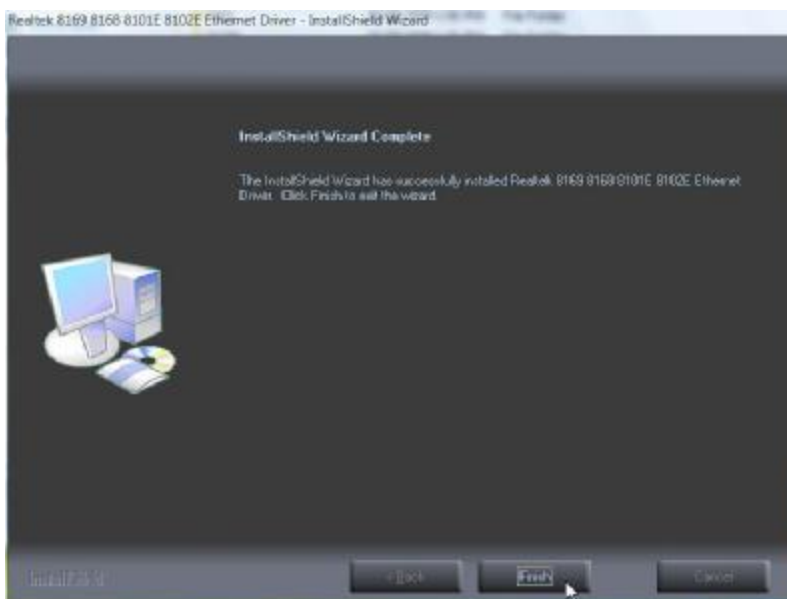


(for Windows Vista)

5. Please wait while processing.



(for Windows XP)



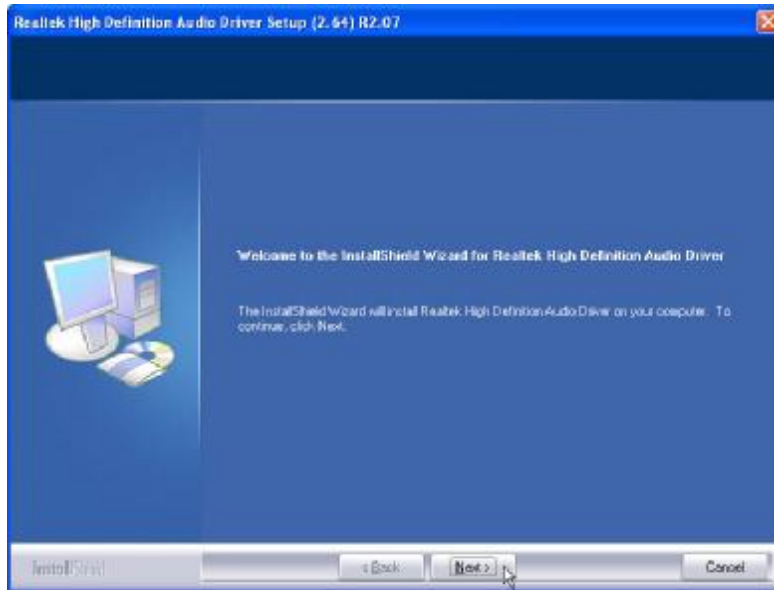
(for Windows Vista)

6. Click **Finish** to complete the installation procedure.

Audio Driver Installation

Audio Driver Installation for Windows XP & Vista

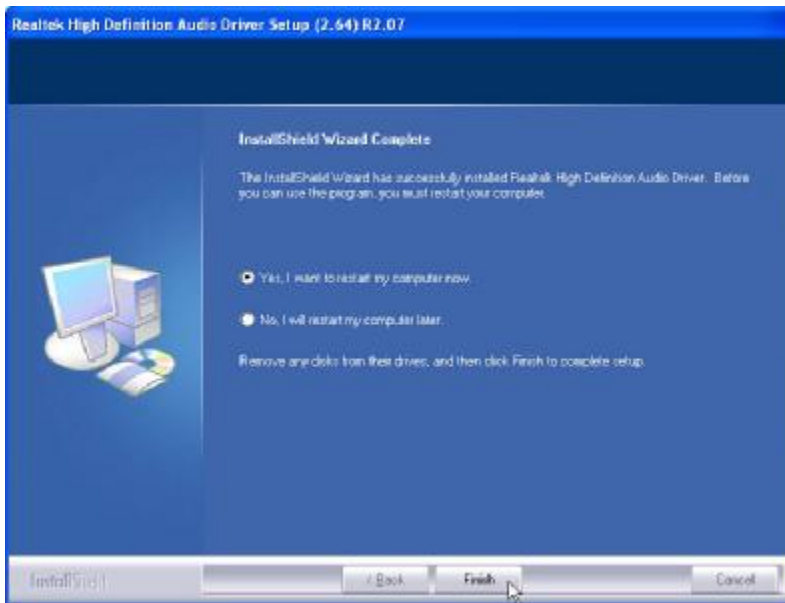
1. Locate **D:\Driver\Audio\WinXP_Vista_2k**
2. Double click **Setup.exe**.



3. Click **Next** to continue.



4. Click **Next** to continue.

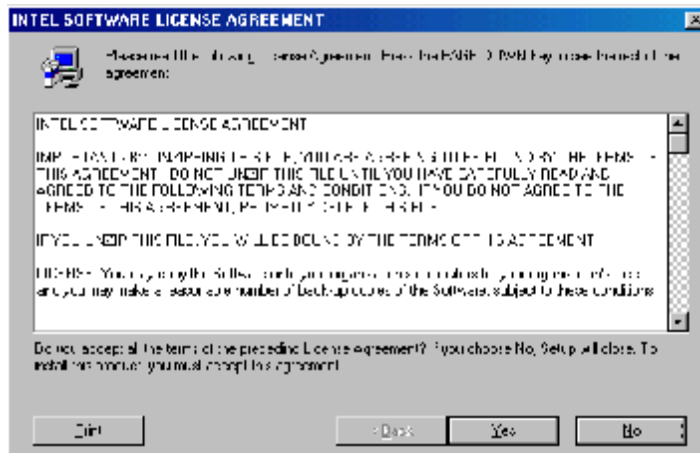


5. Click **Finish** and restart the system.

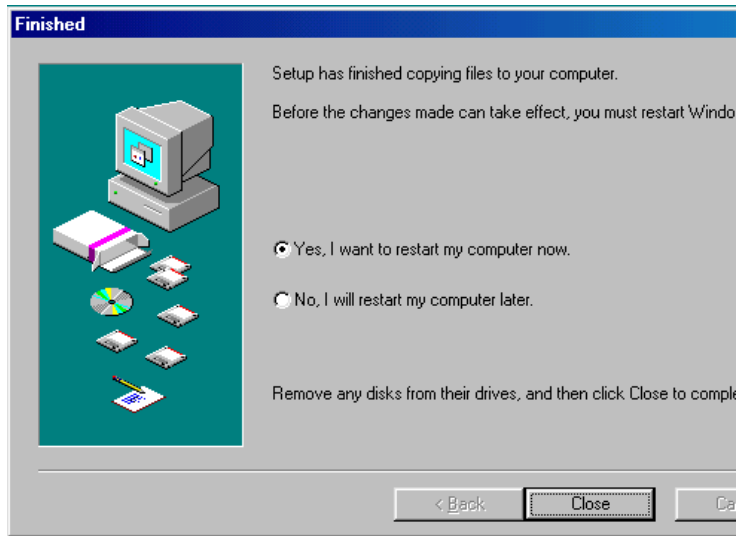
USB Driver Installation

USB 2.0 Installation for Windows 98 & ME

1. Open D:\PEB-4720\USB20\WIN9X
2. double click **Setup.exe**.



3. Read the License Agreement and click **Yes**.



4. Click **Close**

USB 2.0 Installation for Windows 2000 and XP

For Windows 2000, SP4 must be installed for USB 2.0 support.

For Windows XP, SP1 or SP2 must be installed for USB 2.0 support.

Note, with lower version service packs only USB 1.1 is supported. This will be indicated in the device manager as an exclamation icon (!) beside the USB device.

Following service pack upgrade, it is NOT necessary to install the Intel USB 2.0 driver.

ELO Touch Tools Installation

ELO Touch Tools Installation for Windows XP & Vista

1. Locate **D:\Driver\TouchScreen\ELO Touch\XP_Vista**
2. Open **SW600650.exe**



3. Click **OK** to continue.



4. Click **Unzip** to continue the installation.



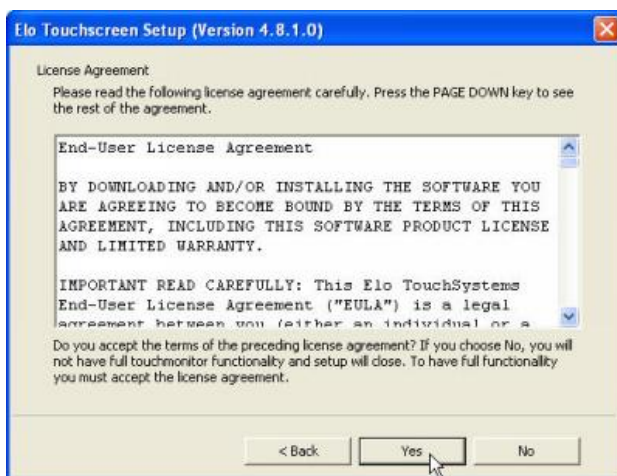
5. Click **OK** to continue.



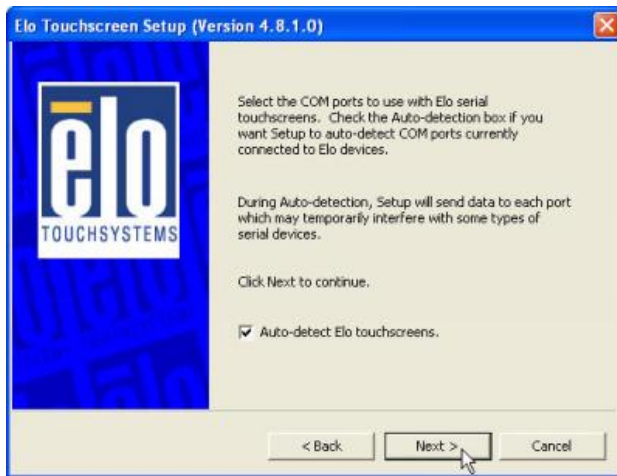
6. Pick the default language for the Elo Touchscreen and click **Next** to continue.



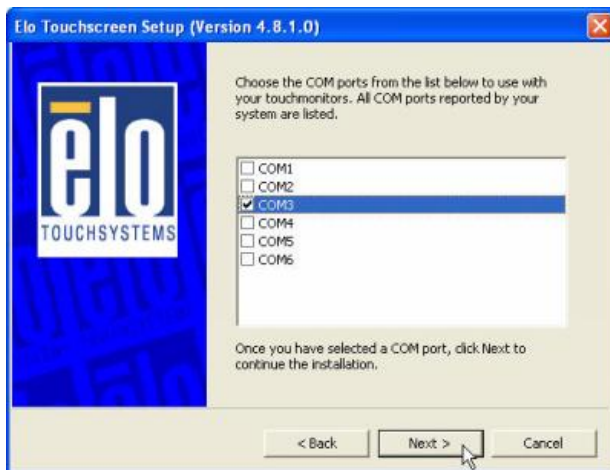
7. Check "Install serial Touchscreen Drivers" And click **Next**.



8. Read the "**License Agreement**" and click **Yes** if you accept it.



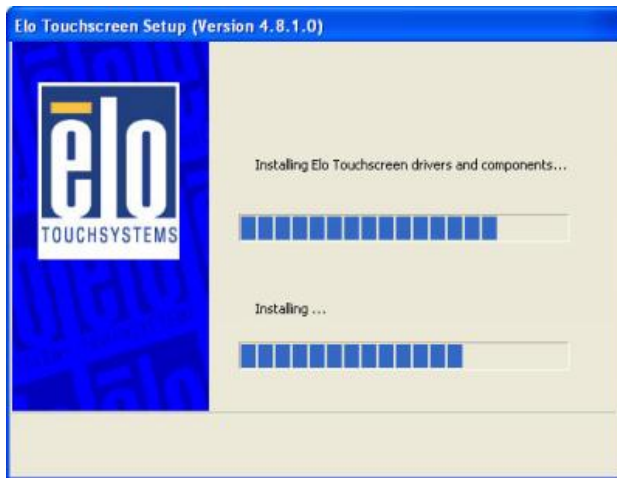
9. Select “Auto-detect Elo touchscreens” and click **Next**.



10. Select the COM port for the touch monitor. It is recommended that you select **COM3** for the touch screen, as this port is internally configured for touch operation. And click **Next** to continue.



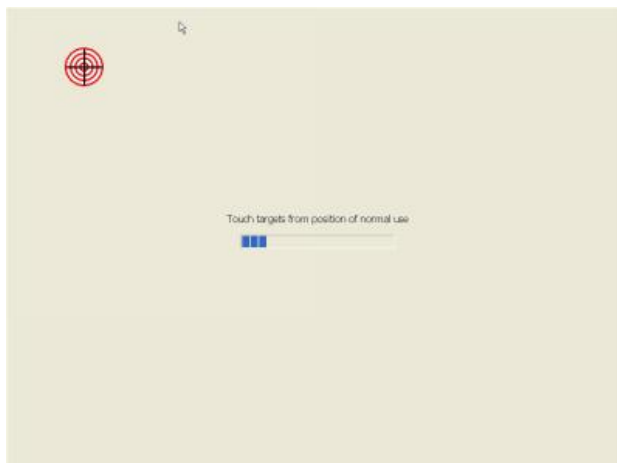
11. Make sure the COM port listed is the one you chose for your touch monitor. Press **Next** to continue.



12. Wait until the ELO Touch Tools installation finished.





13. Select “Calibrate ELO Touchscreen monitors” and click **Finish**.



14. Start calibrating the touchscreen by touch the targets showed on the screen.



15. If the cursor is working fine, click  to finish the setting; if not, click  to calibrate the screen again.

IT MAY BE NECESSARY TO RESTART YOUR COMPUTER TO UTILIZE YOUR TOUCHSCREEN FEATURES.



16. Click **Restart** to reboot your computer again.

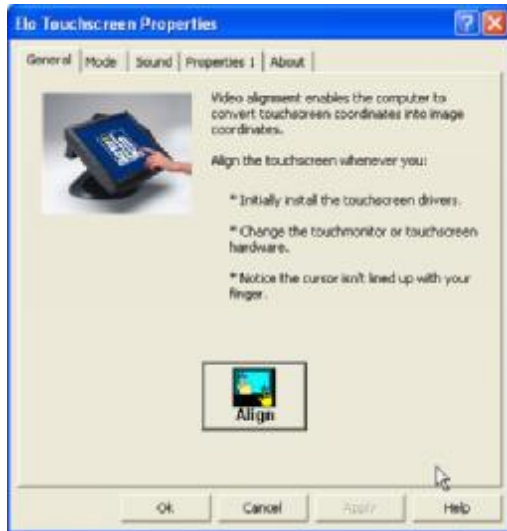
ELO Control Panel

This section explains the different options in the ELO control Panel.

General tab

The general tab allows you to:

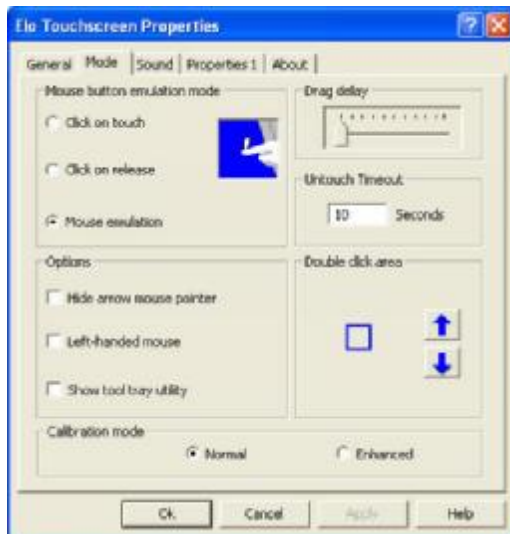
- Change the COM port your touch screen is set to.
- Calibrate the touch screen with the **Align** button.



Mode tab

The Buttons tab allows you to:

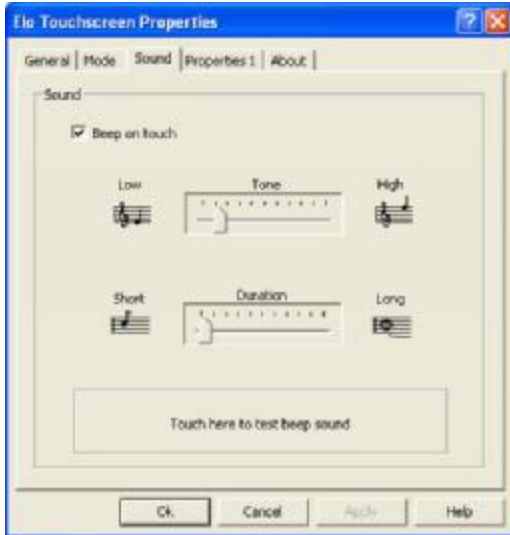
- Adjust all mouse emulation controls.
- Change cursor properties
- Enable or disable right mouse button utility.



Sound tab

The Sound tab allows you to:

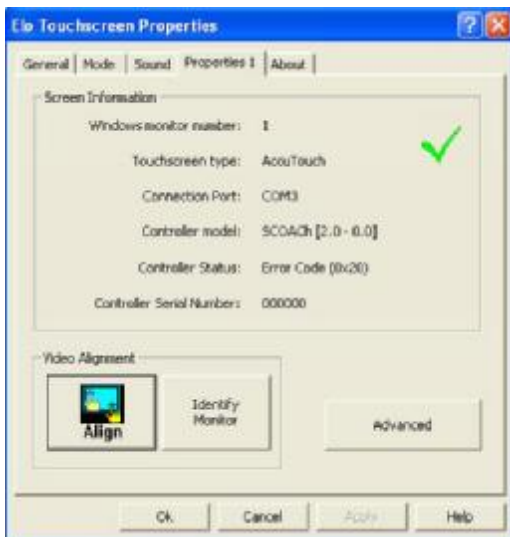
- To change sound properties for ELO touch tools.



Properties tab

The Diagnostics tab allows you to:

- View Controller Information.



About tab

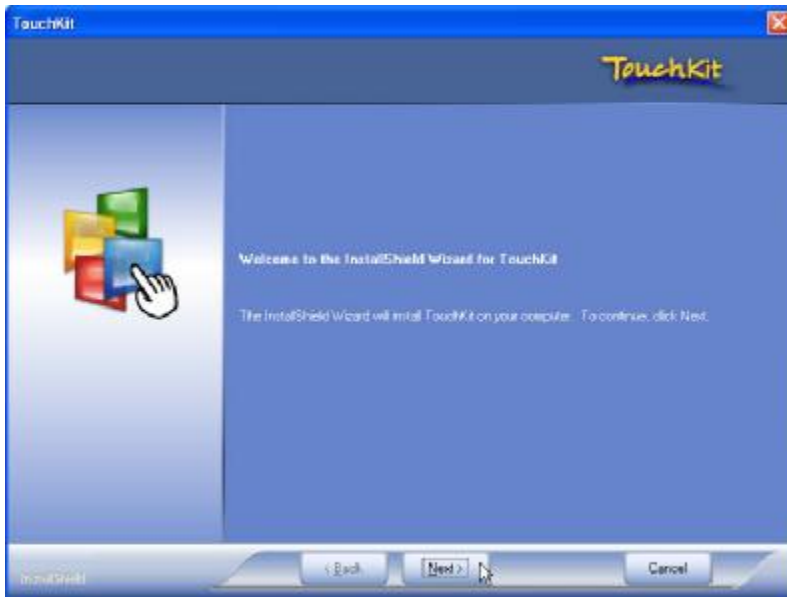
The About tab displays Information about ELO Touch systems



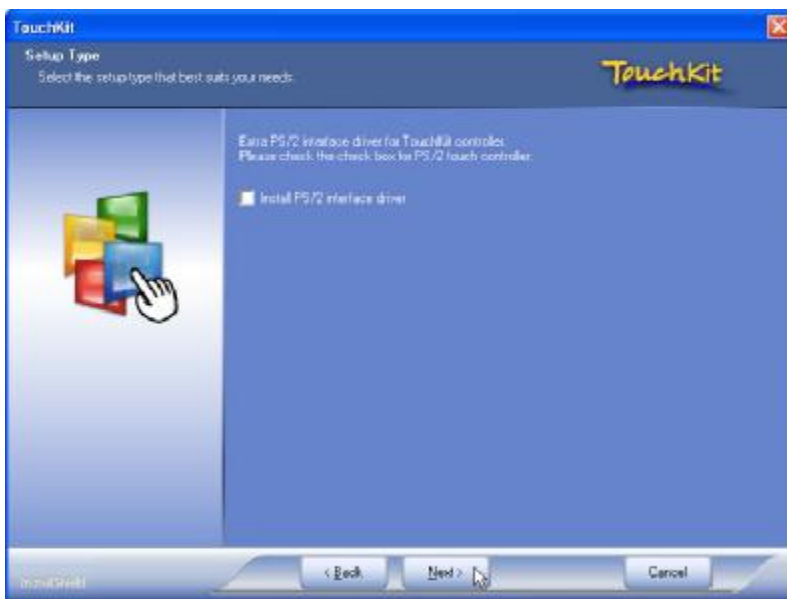
TouchKit Tools Installation

Fuji TouchKit Installation for Windows XP & Vista

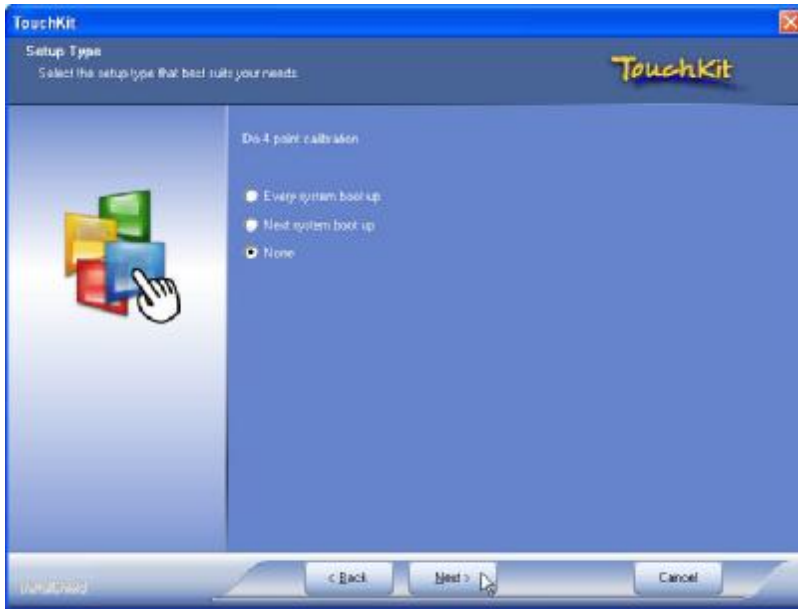
1. Locate **D:\Utility\TouchScreen\TouchKit(Fujitsu)\Windows 2000 XP**
2. Select the relevant folder for the operating system that you are using.
3. Open **Setup.exe**



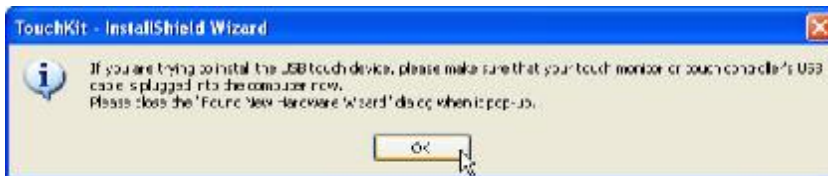
4. Click **Next**



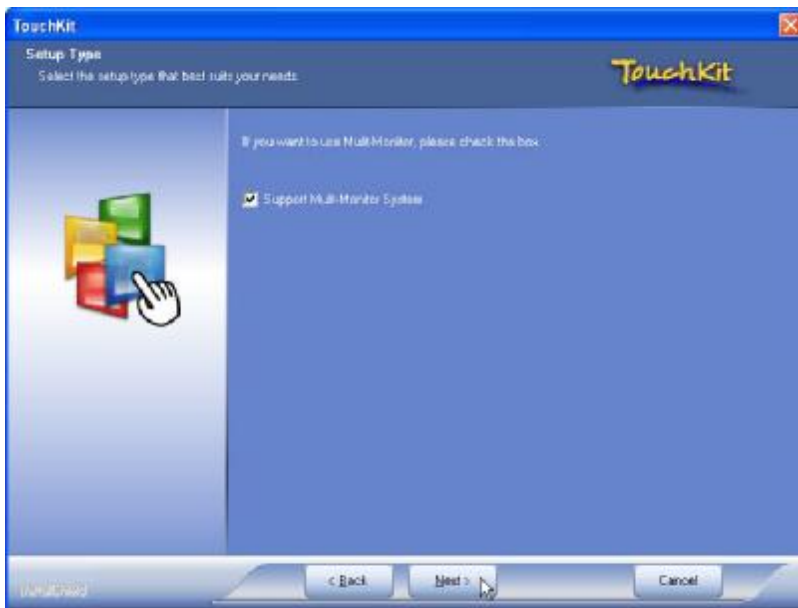
5. Click **Next**



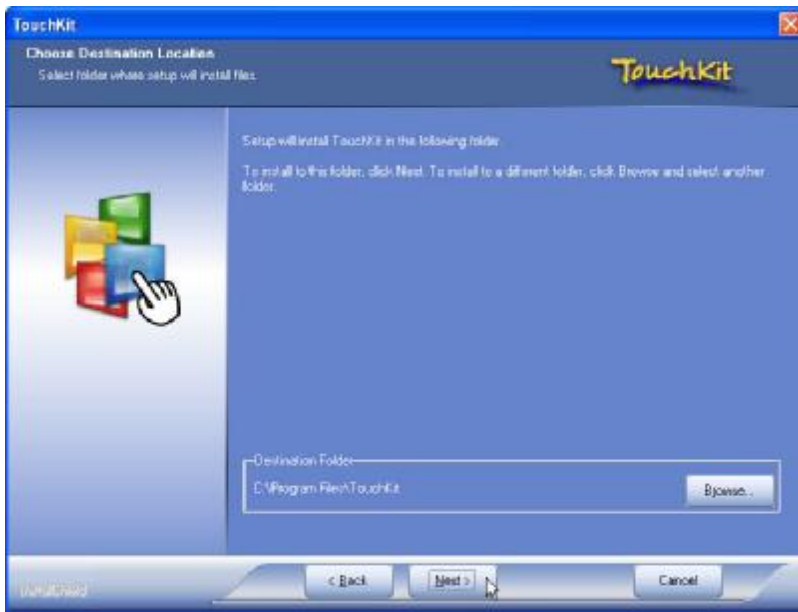
6. Click **Next**



7. Click **OK** to close the pop-up dialog.



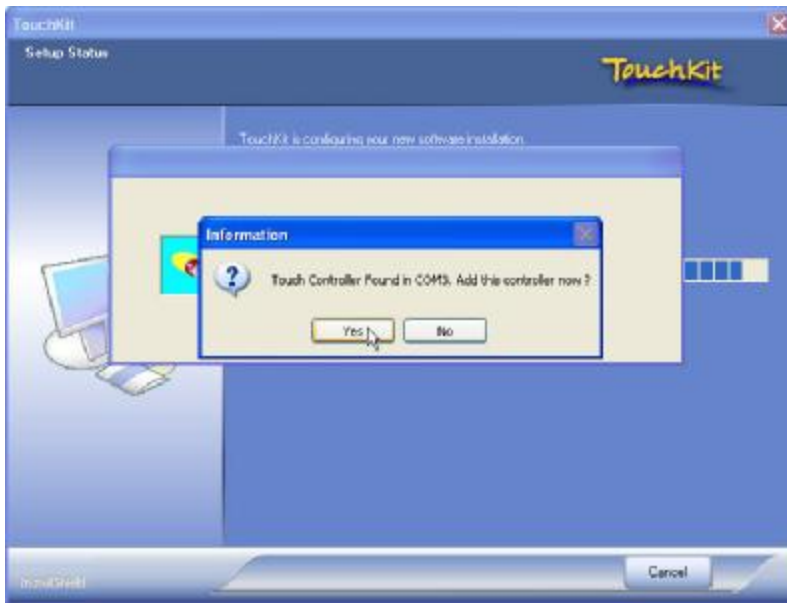
8. Click **“Support Multi-Monitor System”** and then **Next** to continue.



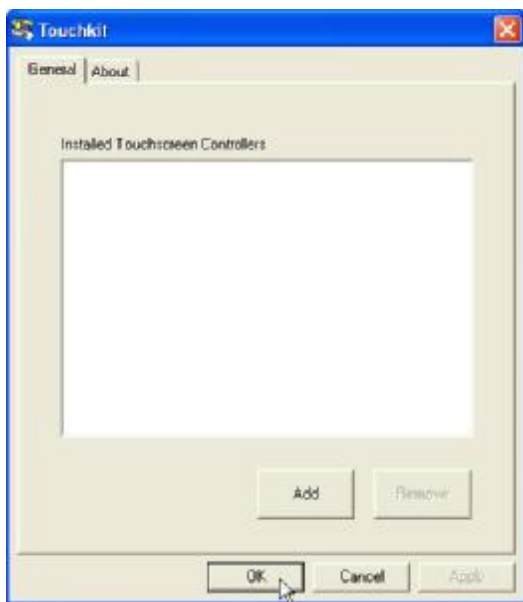
9. Click Next



10. Click Next



11. Click **Yes**



(for Windows XP)



(for Windows Vista)

12. Click **OK** and turn off the computer to restart your system again.

After the system finish rebooting follow the directions to calibrate the Touch screen.

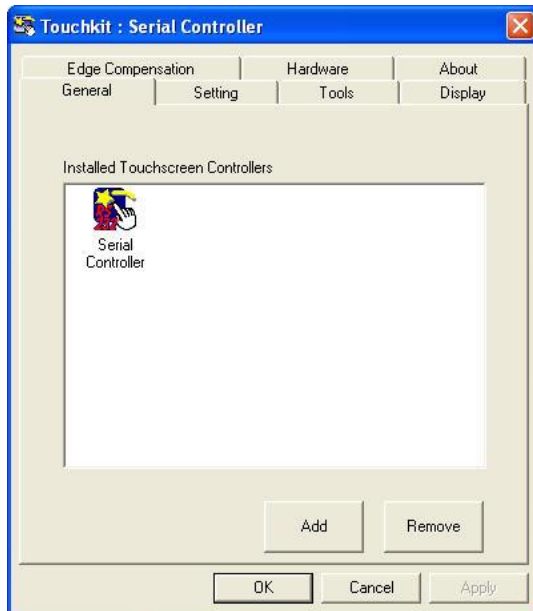
TouchKit Control Panel

This section explains the different options in the TouchKit control Panel.

General tab

The general tab allows you to:

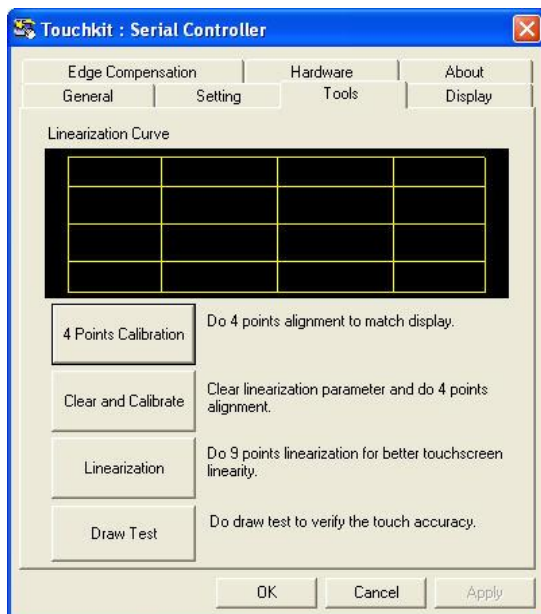
- Manage the touch screen controller you installed.



Tools tab

The tools tab allows you to:

- Calibrate the touch screen with the **4 Points Calibration** button.



FIX COM PORT Tools Installation

At time of publication, there is a odd configuration applied to the COM5 and COM6 serial ports after Windows XP has been installed regardless of the settings in BIOS.

Please note that this odd configuration does not exist with other Windows operating systems, or Linux.

Basically what occurs is the physical connectors on the motherboard are re-enumerated by Windows XP so that they are exactly swapped over. See the table below.

Therefore it may be necessary for your application programs that utilize these ports to be aware of this anomaly.

| | Port | Address | IRQ | Connector |
|------|------|---------|-----|-----------|
| BIOS | COM5 | 4F8 | 10 | J43 |
| BIOS | COM6 | 4E8 | 11 | J42 |
| XP | COM6 | 4E8 | 11 | J42 |
| XP | COM5 | 4F8 | 10 | J43 |

We do provide a utility to fix this anomaly so that after Windows XP has been installed the port connectors will be forced to revert back to the correct enumeration.

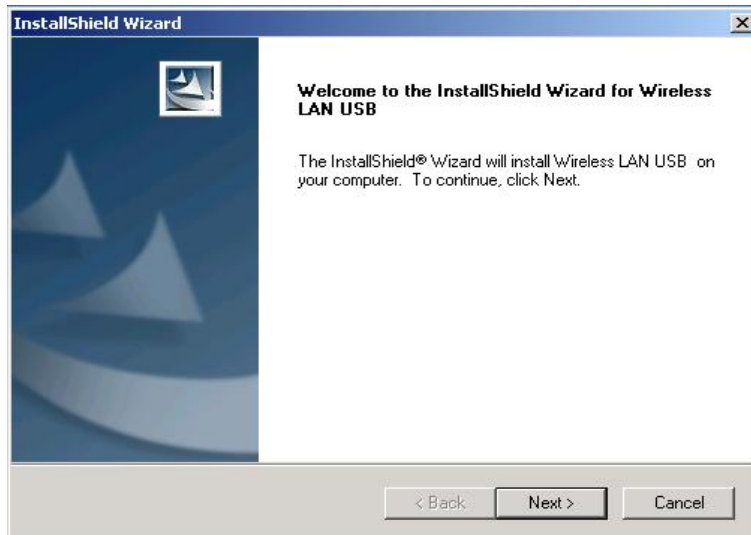
FIX COM Port Tools Installation for Windows XP

1. Open **D:\PEB-4720\FIX COM PORT**
2. Double click **Setup.exe**.
3. Restart the system

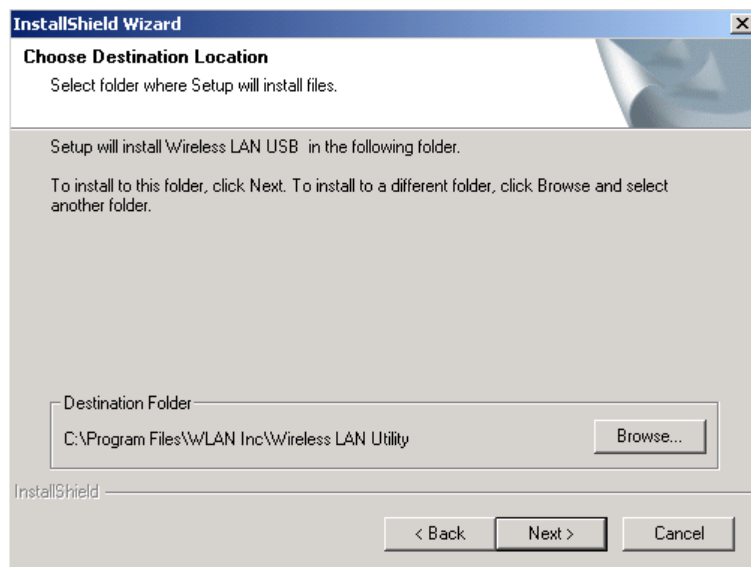
Wireless LAN Driver Installation

Wireless LAN Driver Installation for all Windows Operating Systems (Optional)

1. Open **D:\Utility\Wireless LAN** folder
2. Run **Setup.EXE**



3. Click **Next**



4. Click **Next**

Chapter 4

Specifications

| System Configuration | |
|----------------------------|---|
| CPU (LGA 775) | INTEL® Celeron 440 (2.0GHz) or Dual Core E2160 (1.8GHz) |
| Chipset | Intel® 82945G |
| Real-time clock | Intel® 82801GB ICH7 |
| DRAM | Support Two DDRII 400/533MHz SDRAM up to 2GB |
| VGA controller | Integrated in 945G (Graphics Media Accelerator 950). Up to 224MB maximum video memory, allocating system memory dynamically |
| Primary LCD Panel | 15" TFT LCD Panel (1024x768). |
| Primary Touch Panel | 15" ELO 5-wire resistive touch panel 15" Fujitsu 4-wire resistive touch panel |
| HDD | Internal 2.5" Serial ATA 80GB hard disk drive as default (Build in Dual 2.5" HDD is optional) |
| Hardware monitor | Built in to monitor power supply voltage and fan speed status |
| Watchdog timer | Software Programmable Reset generated when CPU does not periodically trigger the timer. Your can use INT15 to control the watchdog and generate a system reset. |
| Speaker | 2 watt pedestal-integrated speaker. |
| Power | 270 watt external power adapter. |
| I/O Port | |
| Serial Port | 3 User available COM ports (COM1, COM2, COM5). 2 System assigned COM ports (COM3 & COM4). Ø COM3 for primary touch screen. Ø COM4 for built-in LCM customer display 1 Reserved (COM6) |
| Parallel Port | One Bi-directional Parallel Port Support ECP/EPP (IEEE1284). |
| USB port | 8 USB 2.0 ports (3*Internal, 5*External) |
| Cash drawer port | RJ11 Single/Dual Cashdrawer port ,12V actuation support. |
| Mouse Port | One PS/2 mouse port. |
| Keyboard Port | One PS/2 keyboard port. |
| LAN Port | 10/100M Base-T Ethernet Controller, Realtek RTL8102E |
| VGA Port | Internal System assigned VGA Port for second LCD panel External Standard D-SUB 15 Pin VGA Port |
| Audio Port | Integrated Sound Blaster compatible, AC97 Audio Codec. (Realtek ALC662) |
| Construction | |

RP3200B + FEB 9450

| | |
|------------------------------|---|
| | Injection-Molded, Die-cast aluminum enclosure, spill resistance. |
| Optional Features | |
| Customer display | Integrated VFD/LCD customer display. |
| Magnetic card reader | Integrated Single/Dual/Triple Track MCR. |
| Second LCD Panel | Optional 15" TFT LCD Panel. |
| Second Touch Panel | Optional 15" ELO 5-wire resistive touch panel. |
| Power Consumption | |
| Power consumption | 150W (Standard system while running programs and accessing HDD). |
| Operating temperature | |
| Operating temperature | 0 °C ~ 40 °C (*CPU needs Cooler & silicone heatsink paste*) |

Chapter 5

Troubleshooting

Please note that the following troubleshooting guide is designed for people with strong computer hardware knowledge such as System Administrators and Engineers.

Power is on, but there is no Panel Display

- A) Enter BIOS setup program and then get into the Boot Display option. Check if the default setting is [Auto]; if not, change the setting to [Auto] and press **F10** to save the settings.
- B) Due to the chipset limitation, while two displays are connected to the system, both display contents will shrink and cannot show properly in size under DOS mode. After the system booting completed and running under the Windows OS, the display will show in normal size. Such situation appears both in 945GC and 945G chipsets.

Cannot Detect HDD

- A) SATA cable is not connected properly to mainboard SATA1/SATA2 or it could be defective.
- B) HDD power cable is not connected properly to the mainboard or it could be defective.
- C) Check CMOS setup, set SATA HDD to Auto detects.
- D) On-board IDE port could be defective.

Touch Panel Does not Work

- A) Check CMOS settings, COM3 needs to be "Enabled". The correct settings are "3E8" and "IRQ10".
- B) Check if there are no conflicts between COM3 IRQ10 and any other devices.
- C) Check if the ELO driver or the TouchKit driver has been properly installed. Or try to reinstall again (Please refer to the ELO driver installation or the TouchKit driver).
- D) Check that the ELO controller on COM3 has been detected during the ELO driver installation. If yes, then check that the flat cable from the ELO touch screen has been properly connected to the ELO controller (**Attention:** Pin1 mark should be on the same side as the ELO controller).
- E) Check that the ELO controller Green LED is blinking?
If no, there is no DC+5V support for the ELO controller from the mainboard.

- F) Touch screen controller could be defective or the touch panel could be defective.

ELO Touch Panel Cannot Calibrate Correctly

- A) Please replace the ELO controller, and re-calibrate. If this works, change back to the original ELO controller, and re-calibrate.
- B) If the ELO touch panel still cannot calibrate correctly after changing to a new ELO controller, the touch panel may be not installed properly or it could be defective.

Second LCD Panel is Not Functioning Properly

- A) Check that the VGA driver 82945G is installed properly (Please refer to the VGA driver installation section).
- B) Connect a VGA CRT monitor to the VGA 2(onboard wafer) connector, if there is a display, then the second LCD panel could be defective or is not installed properly.
 - B-1) Please check that both the VGA signal cable and second LCD power cable are connected properly (Shut the power off before connecting the 2 above mentioned cables).
 - B-2) Check that the VGA cable is connected to A/D board. Or it could be defective.
 - B-3) Check that the LCD signal cable is properly connected to A/D board and LCD panel. Or it could be defective.
Please re-connect both ends of the LCD signal cable in the correct location. Or replace with a new cable.
 - B-4) There will be no backlight if the is inverter is defective.
- C) Check the 10 PIN VGA cable is well connected to mainboard VGA2 and RG9000CB0930, also the RG9000CB0930 is properly docking with secondary display.
- D) The main board VGA chip could be defective.
- E) The RG9000CB0930 secondary docking board could be defective.

Second Touch Screen is Not Functioning Properly

- A) Check CMOS settings, COM4 needs to be "Enabled". The correct settings are "2E8" and "IRQ11".
- B) Check that there are no conflicts between COM4 IRQ11 and any other devices.
- C) Check that the ELO driver has been properly installed. Or try to re-install again (Please refer to the ELO driver installation).
- D) Check that the ELO controller on COM4 has been detected during the ELO driver installation. If yes, then check that the flat cable from the ELO touch screen has been properly connected to the ELO controller.
(**Attention:** Pin1 mark should be on the same side as the ELO controller).
- E) Check that the ELO controller Green LED is blinking.
If no, there is no DC+5V support for the ELO controller from the mainboard.
- F) ELO controller could be defective or the ELO Touch panel could be defective.

PS/2 Keyboard is not Functioning Normally

- A) Make sure the keyboard is properly connected to the PS/2 keyboard port before the system is powered up. If the keyboard is connected after OS has been booted, the keyboard will not work.
- B) Check that the LED on the keyboard goes on then off after power on. If yes, the keyboard is getting power correctly.
- C) If the MCR is not required. Please make sure the loopback is plugged into the MCR connector board.
- D) Check that the 6 wire cable has been properly connected between the MCR connector board and mainboard MCR1.
- E) The mainboard could be defective.

MCR is not Functioning Properly

- A) Check if the green MCR LED is on.
 - A-1) Check if the MCR is properly connected to the MCR connector board on main system.
 - A-2) Make sure the 6 wire cable is properly connected between mainboard MCR1 and the MCR connector board.
 - A-3) The MCR connector board could be defective.
 - A-4) The MCR module could be defective.
- B) If a keyboard is connected to the PS/2 keyboard port, and functions correctly, then the MCR module could be defective.
- C) For an MCR to work under Windows2000, the keyboard must be connected prior to booting the system.

VFD Display is not Functioning Properly

- A) Ensure that COM4 is enabled in the CMOS setup, and data is written to COM4 in the application.
- B) Check if there is any display when system power is ON, if the screen is blank, please follow the steps below.
 - B-1) Make sure the power switch on the VFD display is on before powering the main system.
 - B-2) Make sure that the RG9000CB0930 Docking board is well connected with VFD module.
- C) Check RS-232 cable is properly connected between Main board and RG9000CB0930 Docking board.
- D) The RG9000CB0930 primary docking board could be defective.
- E) The on-board COM4 I/O chips could be defective.

LAN is not Functioning Properly

- A) Check if the LAN driver is installed properly. (Please refer to the LAN driver installation)
- B) Check if there are any IRQ conflicts.

- C) Check if the RJ45 cable is properly connected.
- D) The on board LAN chip could be defective.

COM1, COM2 and COM5 are not Functioning Properly

- D) Check if the I/O ports are enabled in the CMOS setup.
- E) Check if there are any IRQ conflicts.
- F) The motherboard could be defective.

Cash Drawer Port is not Functioning Properly

- A) Make sure the pin assignment matches between the cash drawer and the RJ11 cash drawer port.
- B) Verify the digit I/O port address is 2F
- C) The motherboard could be defective.

USB device is not Functioning Properly

- A) Ensure that the USB controller is “enabled” in the CMOS setup.
- B) Check if the 4pin USB cable is properly connected between RG9000CB0930 secondary I/O CN9 and mainboard J8.
- C) The mainboard or RG9000CB0930 secondary I/O board could be defective.